

## I CLAIM:

1. An angle measuring system, comprising:

a stator and a rotor for measuring an angular position between a stationary first object and a second object, which is rotatable about an axis of rotation;

5 a coupling that couples said stator to said stationary first object so that said stator is fixed against relative twisting, but is also radially and/or axially resilient;

a mounting element attached to said coupling, wherein said mounting element clamps a face of said stationary first object by expanding in a radial direction with respect to said axis of rotation;

10 an expansion element that interacts with said mounting element so as to cause said expanding in a radial direction; and

a screw that actuates said expansion element, wherein said screw is screwed into said stationary first object.

15 2. The angle measuring system of claim 1, wherein said screw comprises said expansion element.

3. The angle measuring system of claim 1, wherein said mounting element comprises a first end and a second end and is ring-shaped, said first end and said second end of  
20 said mounting element are spaced apart and form a gap extending in an axial direction with respect to said axis of rotation.

4. The angle measuring system of claim 3, wherein said expansion element enters

into said gap and acts on said first and second ends of said mounting element.

5           5.       The angle measuring system of claim 1, wherein said expansion element is a conical end of said screw.

          6.       The angle measuring system of claim 3, wherein said first end and said second end of said mounting element have an oppositely axially acting interlocking connection.

10           7.       The angle measuring system of claim 6, wherein said interlocking connection comprises a first stop and a second stop, which are effective in said axial direction on said first end and said second end of said mounting element.

15           8.       The angle measuring system of claim 1, wherein said screw is screwed into said stationary first object in a direction radial with respect to said axis of rotation.

          9.       The angle measuring system of claim 1, wherein said screw is screwed into a motor flange of a motor.

20           10.      A method for mounting an angle measuring system to a drive mechanism, comprising:

                  providing a drive mechanism that comprises a stationary first object and a first shaft that rotates about an axis of revolution;

                  providing an angle measuring system that comprises a stator and a second shaft

for measuring an angular position between said stationary first object of said drive mechanism and said second shaft of said drive mechanism;

fastening a coupling to said stator of said angle measuring system;

fastening said coupling to said stationary first object of said drive mechanism

5 via a mounting element so that said coupling is fixed against relative twisting, but is radially and/or axially resilient;

clamping said mounting element on an interior face of said first stationary object of said drive mechanism by inserting an expansion element into said stationary first object of said drive mechanism so as to cause a radial expansion of said mounting element so  
10 as to be fixed against relative rotation; and

connecting said second shaft of said angle measuring system to said first shaft of said drive mechanism so as to be fixed against relative rotation.

11. The method of claim 10, wherein said inserting comprises screwing said  
15 expansion element into said stationary first object of said drive mechanism.

12. The method of claim 11, wherein said screwing is in a radial direction with respect to said axis of rotation.